

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: M.Sc
BRANCH: ENVIRONMENTAL SCIENCE AND MANAGEMENT**

**SEMESTER : IInd
SESSION : SP/2025**

SUBJECT: ES507 EARTH SCIENCE

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Explain the theory of Nebular Hypothesis about the origin of earth that have contributed to our understanding.	[5] 1	2
Q.1(b)	Discuss the evolution of continents through geological time. How have plate tectonics and continental drift contributed to the current arrangement of continents?	[5] 1	2
Q.2(a)	Describe the three main types of rocks: igneous, sedimentary, and metamorphic. How do they form, and what are their key characteristics?	[5] 2	2
Q.2(b)	Explain the various types of chemical weathering processes, including oxidation, hydrolysis, and carbonation.	[5] 2	2
Q.3(a)	Explain the key processes involved in wind erosion, such as abrasion and deflation, and how do they shape landscapes.	[5] 3	2
Q.3(b)	Explain the process of delta formation and the key factors that contribute to the creation of a delta at the mouth of a river.	[5] 3	3
Q.4(a)	Define faults in geology. Describe the different types of faults (normal, reverse, and strike-slip)	[5] 4	2
Q.4(b)	Explain the terms dip and strike in structural geology. How are they used to describe the orientation of rock layers?	[5] 4	2
Q.5(a)	Discuss the main causes of volcanic eruptions and the hazards associated with volcanic eruptions	[5] 5	3
Q.5(b)	Define disaster management and describe its purpose in mitigating the effects of natural or man-made disasters.	[5] 5	2

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